REMARKS

In response to the Office Action mailed 2 July 2002, the application has been carefully reviewed and amended. Applicant thanks Examiner Uhlir for his analysis of the cited references and detailed Office Action. Applicant respectfully requests entry of the amendment, and reconsideration of the application.

Rejections Under 35 U.S.C. §103

Claims 1-20, 23-24, 26 and 33-65 stand rejected under 35 U.S.C. §103 as being obvious over Ford (U.S. Patent No. 5,545,448) in view of Miyama (U.S. Patent No. 5,763,011). (Paper 12, Page 2, Paragraph 3)

Examiner Uhlir asserts it would be obvious "to substitute the powder containing coating composition taught by Miyama et al. for the urethane coating composition taught by Ford et al." (Paper 12, Page 5, Paragraph 7).

The Examiner asserts the motivation for this modification would be due to the fact:

> (i) Ford et al. teaches using a polyurethane coating composition to form a low friction surface on a weatherseal formed out of rubber,
>
> (ii) Miyama et al. teaches that a urethane coating composition that contains one or more powders selected from thermoplastic and thermoset materials forms a low friction, long lasting, low friction coating on extruded substrates made out of rubber, and
>
> (iii) that adding powder to urethane coating composition lowers the friction of the resulting coating. (Paper 12, Page 5, Paragraph 8).

However, Ford employs a *solvent **based** spray coating* including aromatic hydrocarbon and aliphatic ester solvents (Col. 3, Lines 17-19).

Miyama employs a *solvent **free** urethane paint* having a first and a second powder (Col. 6, Line 26 and 58; Col. 7, Lines 1, 32, 47 and 58; Col. 8, Line 2).

Ford

Ford discloses a two-component spray coating, wherein one "component is a mixture of a branched hydroxyl bearing polyester and a hydroxyl bearing polyacrylate dissolved in aromatic hydrocarbon and aliphatic ester solvents in which coloring pigments and fluorocarbons polymers are suspended." (Col. 3, lines 14-19)

This component "is then *blended in an exact proportion to allow precise reaction* stoichiometry with the cross linking component, this being a solution of two aliphatic polyisocyanates in aromatic hydrocarbon and aliphatic ester solvents in which the fluorocarbon polymer is suspended." (Col. 3, lines 21-25)

> The spray coating consists of a two component material. One component is a mixture of a branched hydroxyl-bearing polyester and a hydroxyl-bearing polyacrylate dissolved in aromatic hydrocarbon and aliphatic ester solvents, in which colouring pigments and fluorocarbon polymers are suspended.
>
> The above component is then blended in an exact proportion to allow precise reaction stoichiometry with the cross linking component, this being a solution of two aliphatic polyisocyanates in aromatic hydrocarbon and aliphatic ester solvents in which fluorocarbon polymer is suspended. (Col. 3)

Ford thus requires a coating formed of a polyester and a polyacrylate dissolved in a hydrocarbon and ester mix. Further, Ford requires:

> The ratio of the individual polyisocyanates to each other is critical in affording a polyurethane coating material with the correct properties of adhesion, flexibility and light fastness. (Col. 3)

That is, Ford dissolves the polyester and polyacrylate in solvents, thereby precluding any particles or powders. Further, Ford requires precise mixing in an exact proportion to provide the necessary bonding.

The proposed replacement of this exact formulation of a *solvent based coating* with a *solvent free paint* is contrary to the primary and the secondary references. Applicant respectfully submits there is no disclosure or suggestion that a powder for the

solvent free urethane paint of Miyama would function in the aromatic solvent based spray coating of Ford.

In addition, Ford does not disclose the recited powder coating or heat fusible powder coating.

Miyama

Miyama employs a *solvent free urethane paint* having a first and a second powder (Col. 6, Line 26 and 58; Col. 7, Lines 1, 32, 47 and 58; Col. 8, Line 2) and is directed to providing a surface roughness in a coating film. (Col. 4, Lines 53-55; Col. 5, Lines 1-2, 12-13, 51-52, 60-62).

The surface roughness is formed by the *discrete individual locations* of the particles. Specifically, the first of powder particles melt during vulcanization of the glass run 10, the particles melt and thus increase in fluidity. The melted particles tend to rise to the surface of the coating film 12. The melted particles of the first powder contract and solidify as the coated glass run cools down.

FIG.4

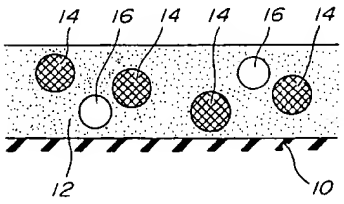
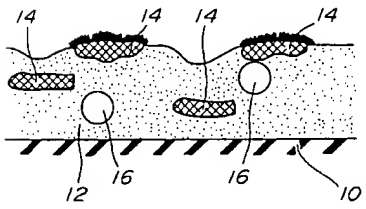


FIG.5



treatment (vulcanization). When the coated glass run **10** is heated for vulcanizing the same, the first powder particles **14** melt and thus increase in fluidity. As is shown in FIG. **3**, the thus melted particles **14** tend to rise to the surface of the coating film **12** because the first powder is different from the urethane paint in SP by at least 0.5, as mentioned hereinabove. Then, the melted particles **14** of the first powder contract and solidify as the coated glass run cools down. As is shown in FIG. **3**, the coating film's surface becomes minutely rough due to the difference of degree of contraction between the first powder and the urethane paint. The coating film's surface more efficiently becomes minutely rough as the first powder particles are positioned closer to the coating film's surface. However, it should be noted that the coating film's surface becomes minutely rough due to the contraction of the first powder particles **14** even if the first powder particles **14** are not positioned close to the coating film's surface. It is preferable that the first powder is smaller than the urethane paint in specific gravity for the purpose of making the first powder particles **14** positioned closer to the coating film's surface. However, even if the first powder is

(Col. 4, Lines 40-60)

Miyama expressly relies upon the discrete and separate nature of the first particles with respect to each other, and with respect to the second particles, in that the particles provide the contact surface with the glass, thereby lowering the friction. There is no powder coating.

> After the application, the coated glass run **10** is subjected to a heat treatment. When the coated glass run is heated for vulcanizing the same, particles **14** of the first powder melt and thus increase in fluidity. The thus melted particles **14** tend to rise to the surface of the coating film **12** (see FIG. **5**). Then, the melted particles **14** contract and solidify as the coated glass run **10** cools down. As is shown in FIG. **5**, the coating film's surface becomes minutely rough due to the difference of degree of contraction between the first powder and the urethane paint. In contrast, the particles **16** of the second powder does not melt at the vulcanization temperature (about 200° C.). Therefore, relative positions of the second powder's particles **16** after the vulcanization are substantially the same as those immediately after the application of the coating. As the first powder's particles **14** positioned on the coating film's surface are abraded, the second powder's particles **16** gradually become exposed on the coating film's surface. Thus, the coating film's surface still become minutely rough. Therefore, according to the second aspect of the present invention, the advantage of friction reduction will last for a longer time. It is needless to say that the coating film according to the second aspect has the abovementioned advantages of the coating film according to the first aspect, too.
>
> (Col. 5, Lines 44-66)

If the Examiner is suggesting a replacement of the entire solvent based spray coating of Ford with the solvent free coating of Miyama, Applicant respectfully submits the primary reference Ford actually suggests the combination would not work. That is, the recited solvent-dissolved polyester/polyacrylate solute solution is in exact proportion to a cross linker and does not suggest use (or interchangeability) of a solvent free (suspended powder in a matrix paint).

Ford states "the required ratio of individual polyisocyanates to each other is *critical* in affording a polyurethane coating material with the correct properties of adhesion, flexibility and light fastness." That is, the solvent based coating of Ford "provides excellent adhesion to both substrates, the dynamic seal portion and the static edge trim portion." [emphasis added] (Col. 3, Lines 30-33)

Substituting a solvent free paint for use on the Ford substrate would be directly contrary to the recited criticality of the primary reference Ford.

Alternatively, if the Examiner is suggesting adding the particles of Miyama into the urethane solvent based paint of Ford, Applicant respectfully submits that express the teaching of a solvent based carrier and that Ford does not suggest a viability of particles used in the solvent free carrier of Miyama. Therefore, the recited benefits of the Miyama particles would not be realized.

With respect to Miyama, the Examiner states "Although the particles are not specifically taught to flow together when they are melted to form a contiguous layer in and of themselves, the examiner takes the position that because the particles are embedded in a polyurethane binder, the coating composition necessarily meets applicants definition of contiguous, as the polyurethane will be present between the powder thus resulting in a "single piece of connected film." (Paper 12, page 6)

It is not a "coating composition" but rather a "powder coating" that forms the present contiguous layer. The present claims recite "powder coating" or "heat fusible powder coating" which are defined in the specification as particles which melt to form a contiguous surface film. That is, the present powder coating is heat fusible such that the powder, as finely ground particles are applied to the substrate and heated, "the particles colliquefy (melt) to form a contiguous film..." (Page 8, line 30 – Page 9, line 1)

As set forth by the examiner in Paper 10, page 4:

> 6. For the purpose of this examination the examiner is interpreting the terms "powder coating," and "heat fusible powder coating" to mean a powder coating which is melted to form a contiguous and preferably continuous layer, as is commensurate in scope with the applicants specification (see page 7, lines 13-28 of the specification).

The powders of Miyama are not heat fusible as set forth in the present application. The powders in the Miyama paint do not fuse together, but rather are selected to remain separate from each other and assume a desired location within the urethane paint so as to form a surface roughness. The powders in the Miyama paint do not form a contiguous surface film.

The express purpose of Miyama resides in the retention of the individual particles.

> above. Then, the melted particles **14** of the first powder contract and solidify as the coated glass run cools down. As is shown in FIG. **3**, the coating film's surface becomes minutely rough due to the difference of degree of contraction between the first powder and the urethane paint. The coating film's surface more efficiently becomes minutely rough as the first powder particles are positioned closer to the coating film's surface. However, it should be noted that the coating film's surface becomes minutely rough due to the contraction of the first powder particles **14** even if the first powder particles **14** are not positioned close to the coating film's surface. It is preferable that the first powder is smaller than the urethane paint in specific gravity for the purpose of making the first powder particles **14** positioned closer to the coating film's surface. However, even if the first powder is the same as or larger than the urethane paint in specific gravity, the coating film's surface becomes minutely rough due to the contraction of the first powder particles **14**. The minutely rough surface of the coating film **12** contributes to the friction reduction. According to the present invention, (Col. 4)

Thus, it is contrary to Miyama to employ a contiguous film formed from the particles, as such film would not create the recited rough surface formed by the individual particles projecting from the urethane paint.

Miyama discloses a *solvent **free** urethane paint* having a first and a second powder (wherein the powder does not form contiguous layer and Ford employs a *solvent **based** spray coating* including aromatic hydrocarbon and aliphatic ester solvents (wherein no powders are employed). There is no suggestion or showing that solvent free paint are interchangeable for solvent based sprays.

"Our case law makes clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." [citations omitted] *Ecolochem v. Southern California Edison Co.* 56 USPQ2d 1065, 1073 (Fed. Cir. 2000). "Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness." *Id.* The Federal Circuit has stated the implicit generalized finding by a

district court that when one of ordinary skill was faced with a problem [of the patent] in view of a prior art reference, that the combination claimed would have been obvious is insufficient. *Ecolochem*

The recited powder coating is neither disclosed or suggested in either the primary or the secondary reference. Further, absent the present disclosure, there is no suggestion to use particles from a solvent free carrier in a solvent based spray.

Applicant notes Claim 1 expressly recites "a heat fusible powder coating on a portion of the metal reinforcing member." Neither reference discloses or suggests the powder coating being disposed on a metal reinforcing member. In fact, each reference employs an extruded glass run onto which the relevant layers are disposed. In the right hand Figure, reference number 3 is a metallic carrier surrounded by elastomeric material such as EPDM[1].

FIG.1

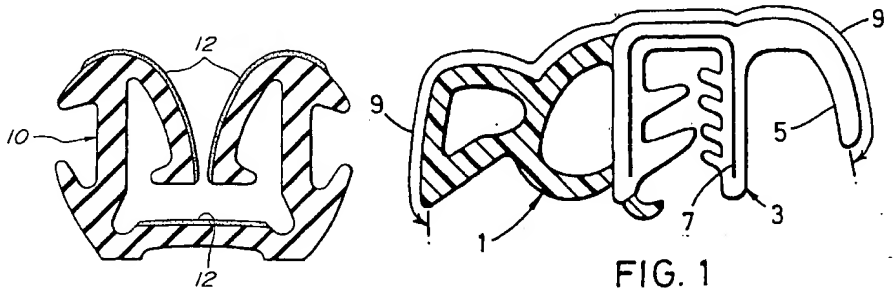
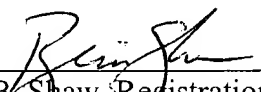


FIG. 1

[1] Though the Examiner asserts "a completely covered metal reinforcing member encompasses a metal reinforcing member that is partially covered." Applicant submits this assertion is not sustainable. That is, Claim 1 recites in part "a heat fusible powder coating on a portion of the metal reinforcing member." The claim requires the powder coating on the metal reinforcing member. A completely covered reinforcing member does not disclose an exposed reinforcing member. Applicant recognizes that a claim limitation of "an at least partially covered reinforcing member" would be met by a completely covered reinforcing member. However, the opposite is not true.

Therefore, applicant respectfully submits all the pending claims, Claims 1-20, 23, 24, 26, and 33-65 are in condition for allowance and such action is earnestly solicited. If, however, the examiner feels any further issues remain he is cordially invited to contact the undersigned so that such matters may be promptly resolved.

Respectfully submitted,



Brian B. Shaw, Registration No. 33,782
HARTER, SECREST & EMERY LLP
1600 Bausch & Lomb Place
Rochester, New York 14604-2711
Telephone No. (585) 231-1193
Fax: No. (585) 232-2152

Date: October 1, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. An automotive weatherseal, comprising:

(a) a resilient polymeric body;

(b) a metal reinforcing member connected to the body; and

(c) a heat fusible powder coating on a portion of the metal reinforcing member and the resilient polymeric body.

2. The automotive weatherseal of Claim 1, wherein the resilient polymeric body includes a trim portion and a sealing portion.

3. The automotive weatherseal of Claim 1, further comprising a quantity of powder coating to form a surface film of fused powder coating having a thickness less than 0.2 mm.

4. The automotive weatherseal of Claim 1, wherein the metal reinforcing member is partially covered by the polymeric body.

5. An automotive weatherseal, comprising:

(a) a substrate having a first portion formed of a first polymeric material and a second portion formed of a different second polymeric material; and

(b) a powder coating on the first portion and the second portion.

6. The automotive weatherseal of Claim 5, wherein the first polymeric material is a thermoset material and the second polymeric material is a thermoplastic material.

7. The automotive weatherseal of Claim 5, further comprising a metallic reinforcing member connected to one of the first portion or the second portion.

8. The automotive weatherseal of Claim 5, wherein a colliquefaction of the powder coating has a thickness between 0.05 mm and 0.2 mm.

9. The automotive weatherseal of Claim 5, wherein the powder coating is a thermoset material and the second polymeric material is a thermoplastic material.

10. A weatherseal comprising:

(a) a weatherseal body having a first portion formed of a first material and a second portion formed of a different second material; and

(b) a powder coating on the first portion and the second portion of the weatherseal body.

11. The weatherseal of Claim 10, wherein the powder coating includes a thermoset and a thermoplastic material.

12. The weatherseal of Claim 10, wherein the powder coating includes a thermoplastic material and the first portion is a thermoset material.

13. The weatherseal of Claim 10, further comprising a metallic-reinforcing member connected to the weatherseal body.

14. The weatherseal of Claim 10, wherein the first portion is a thermoset material, and the second portion is a thermoplastic material.

15. The weatherseal of Claim 10, wherein the powder coating is selected to form a colliquefied layer having a thickness less the 0.2 mm.

16. The weatherseal of Claim 10, further comprising a metallic-reinforcing member having a U-shaped cross sectional profile connected to the weatherseal body.

17. The weatherseal of Claim 10, wherein the powder coating is selected to form a contiguous colliquefaction.

18. The weatherseal of Claim 10, wherein the powder coating is located to form a sealing surface.

19. The weatherseal of Claim 10, wherein the powder coating is selected to form a colliquefaction having a gloss appearance.

20. A weatherseal for sealing an interface between two confronting surfaces in an automotive vehicle, the weatherseal comprising;

(a) a polymeric base formed of a first material;

(b) a resilient sealing portion for contacting one of the confronting surfaces, the resilient sealing portion formed of a different second material; and

(c) a heat fusible powder coating on at least a portion of the base and the resilient sealing portion.

Claim 21. Previously cancelled.

Claim 22. Previously cancelled.

23. The weatherseal of Claim 20, wherein the base includes a trim portion and the heat fusible powder coating is located on the trim portion.

24. The weatherseal of Claim 20, further comprising a metallic reinforcing member in the base.

Claim 25. Previously cancelled.

26. The weatherseal of Claim 20, wherein the base further comprises a trim portion formed of a different material than the sealing portion, and the heat fusible powder coating is on the trim portion.

Claim 27. Previously cancelled.

Claim 28. Previously cancelled.

Claim 29. Previously cancelled.

Claim 30. Previously cancelled.

Claim 31. Previously cancelled.

Claim 32. Previously cancelled.

33. The automotive weatherseal of Claim 1, wherein the trim portion is a thermoplastic material.

34. The automotive weatherseal of Claim 1, wherein the trim portion is a thermoset material.

35. An automotive weatherseal, comprising:

(a) a substrate having a first portion formed of a first polymeric material and a second portion formed of a different second polymeric material; and

(b) a heat fusible powder coating on the first portion and the second portion.

36. The automotive weatherseal of Claim 35, wherein one of the first portion and the second portion forms a trim portion of the weatherseal.

37. The automotive weatherseal of Claim 35, further comprising a metal reinforcing member connected to one of first portion and the second portion.

38. The automotive weatherseal of Claim 35, wherein the substrate has a U shaped cross section.

39. The automotive weatherseal of Claim 35, wherein the substrate includes a metal reinforcing member.

40. A weatherseal for an automotive vehicle, comprising:

(a) a polymeric body;

(b) a metal reinforcing member connected to the body, one of the body and the reinforcing member selected to engage the automotive vehicle; and

(c) a powder coating on a portion of the reinforcing member and the polymeric body.

41. The weatherseal of Claim 40, wherein the polymeric body includes a trim portion.

42. A weatherseal comprising:

(a) a weatherseal body having a first portion formed of a first material and a second portion formed of a different second material; and

(b) a heat fusible powder coating on the first portion and the second portion of the weatherseal body.

43. The weatherseal of Claim 42, wherein the weatherseal body includes a trim portion.

44. (Once Amended) A vehicle weatherseal, comprising:

(a) a thermoplastic weatherseal body, and

(b) a heat fusible powder coating <u>to form a contiguous surface film</u> on at least a portion of a surface of the thermoplastic weatherseal body.

45. The vehicular weatherseal of Claim 44, wherein the thermoplastic weatherseal body includes a sealing portion and trim portion, and the heat fusible power coating is on at least one of the sealing portion and the trim portion.

46. The vehicular weatherseal of Claim 45, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure.

47. The vehicular weatherseal of Claim 44, further comprising a reinforcing member in the thermoplastic weatherseal body.

48. The vehicular weatherseal of Claim 47, wherein the reinforcing member is metal.

49. The vehicular weatherseal of Claim 44, wherein the heat fusible powder coating includes one of a thermoplastic and thermoset material.

50. (Once Amended) A vehicle weatherseal, comprising:

(a) a thermoplastic weatherseal body, and

(b) a powder coating <u>for forming a contiguous surface film</u> on at least a portion of a surface of the thermoplastic weatherseal body.

51. The vehicular weatherseal of Claim 50, wherein the thermoplastic weatherseal body includes a sealing portion and trim portion, and the heat fusible power coating is on at least one of the sealing portion and the trim portion.

52. The vehicular weatherseal of Claim 51, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure.

53. The vehicular weatherseal of Claim 50, further comprising a reinforcing member in the thermoplastic weatherseal body.

54. The vehicular weatherseal of Claim 53, wherein the reinforcing member is metal.

55. The vehicular weatherseal of Claim 50, wherein the powder coating includes one of a thermoplastic and thermoset material.

56. (Once Amended) A vehicular weatherseal, comprising:

(a) a thermoset weatherseal body; and

(b) a heat fusible thermosetting powder coating <u>selected to form a contiguous surface film</u> on at least a portion of the thermoset weatherseal body.

57. (Once Amended) The vehicular weatherseal of Claim 56, wherein the thermoset weatherseal body includes a sealing portion and trim portion, and the heat fusible thermosetting power coating is on at least one of the sealing portion and the trim portion.

58. The vehicular weatherseal of Claim 57, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure.

59. The vehicular weatherseal of Claim 58, further comprising a reinforcing member in the thermoset weatherseal body.

60. The vehicular weatherseal of Claim 59, wherein the reinforcing member is metal.

61. (Once Amended) A vehicular weatherseal, comprising:

(a) a thermoset weatherseal body; and

(b) a thermosetting powder coating to form a contiguous surface film on at least a portion of the thermoset weatherseal body.

62. The vehicular weatherseal of Claim 61, wherein the thermoset weatherseal body includes a sealing portion and trim portion, and the thermosetting power coating is on at least one of the sealing portion and the trim portion.

63. The vehicular weatherseal of Claim 62, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure.

64. The vehicular weatherseal of Claim 61, further comprising a reinforcing member in the thermoset weatherseal body.

65. The vehicular weatherseal of Claim 64, wherein the reinforcing member is metal.